

1/20

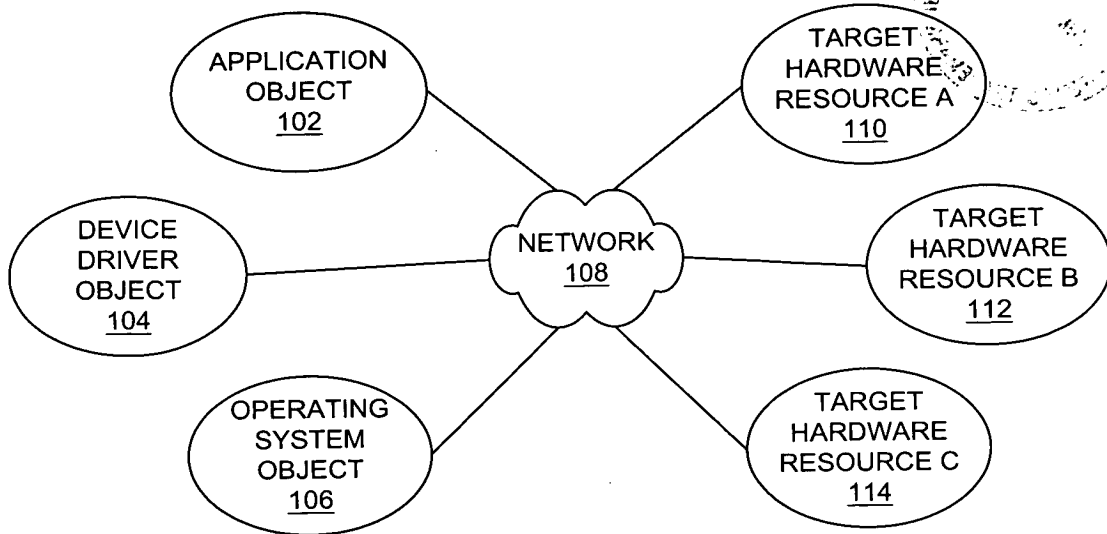


FIG. 1
(PRIOR ART)

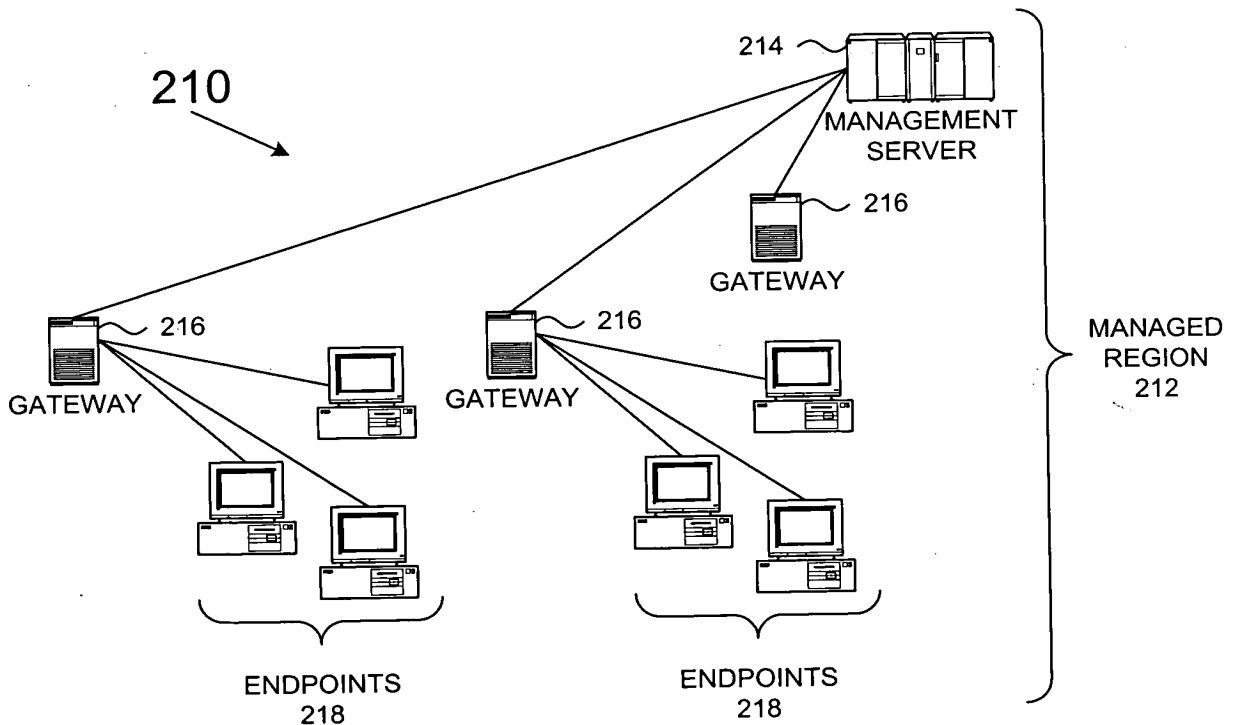


FIG. 2A

T04090" F042E260

2/20

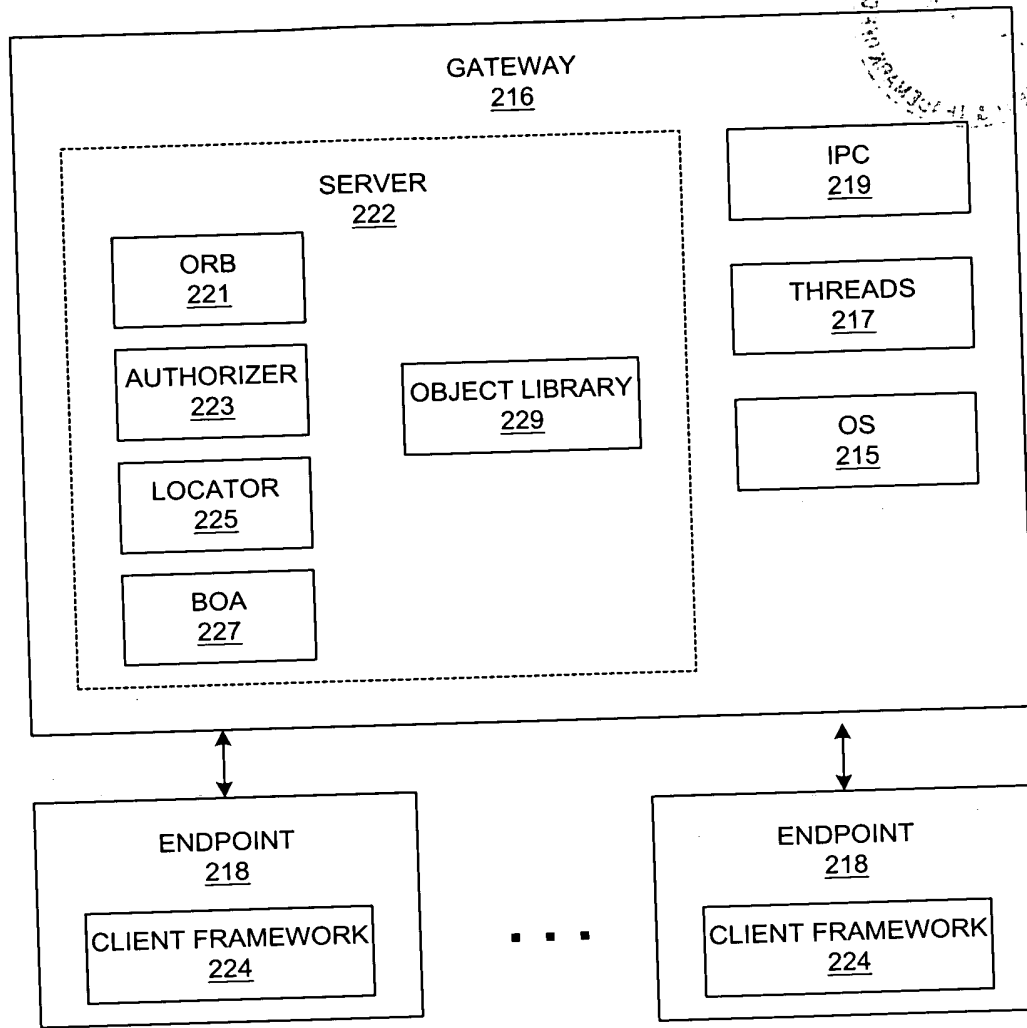


FIG. 2B

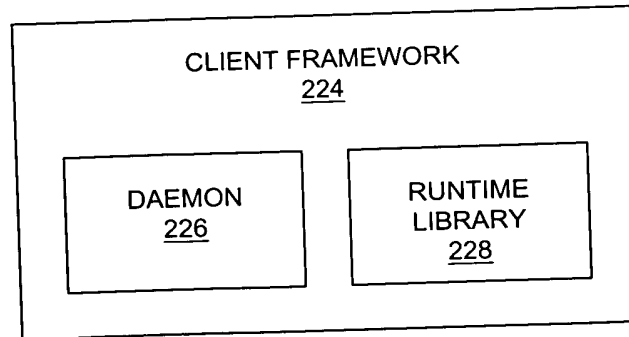


FIG. 2C

09737431.060401

3/20

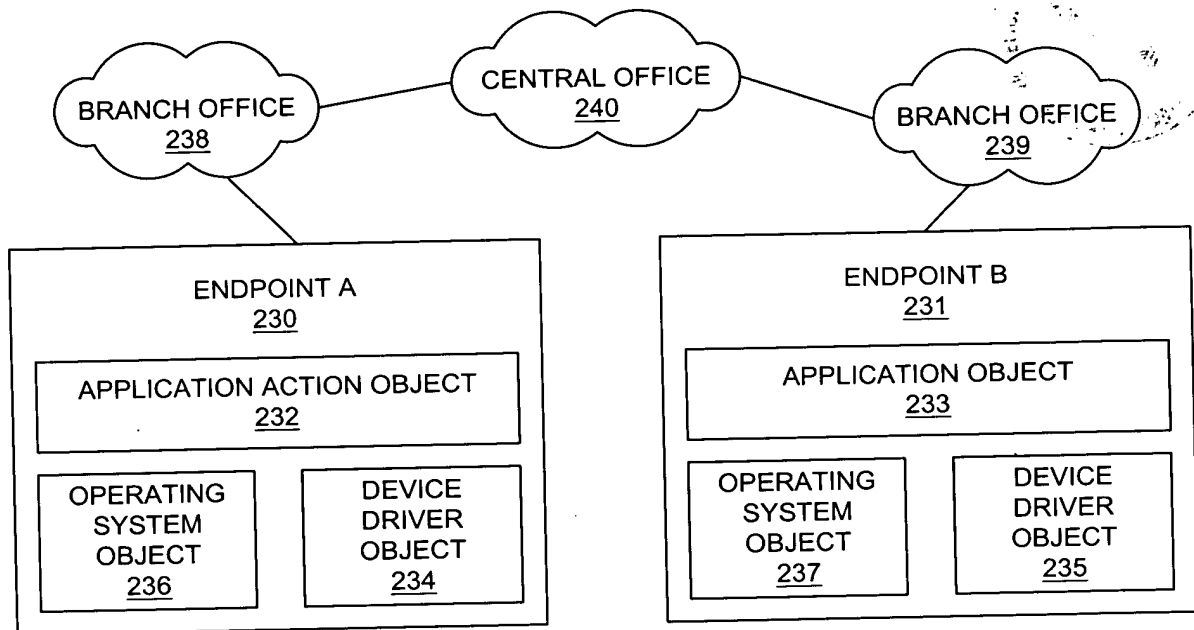


FIG. 2D

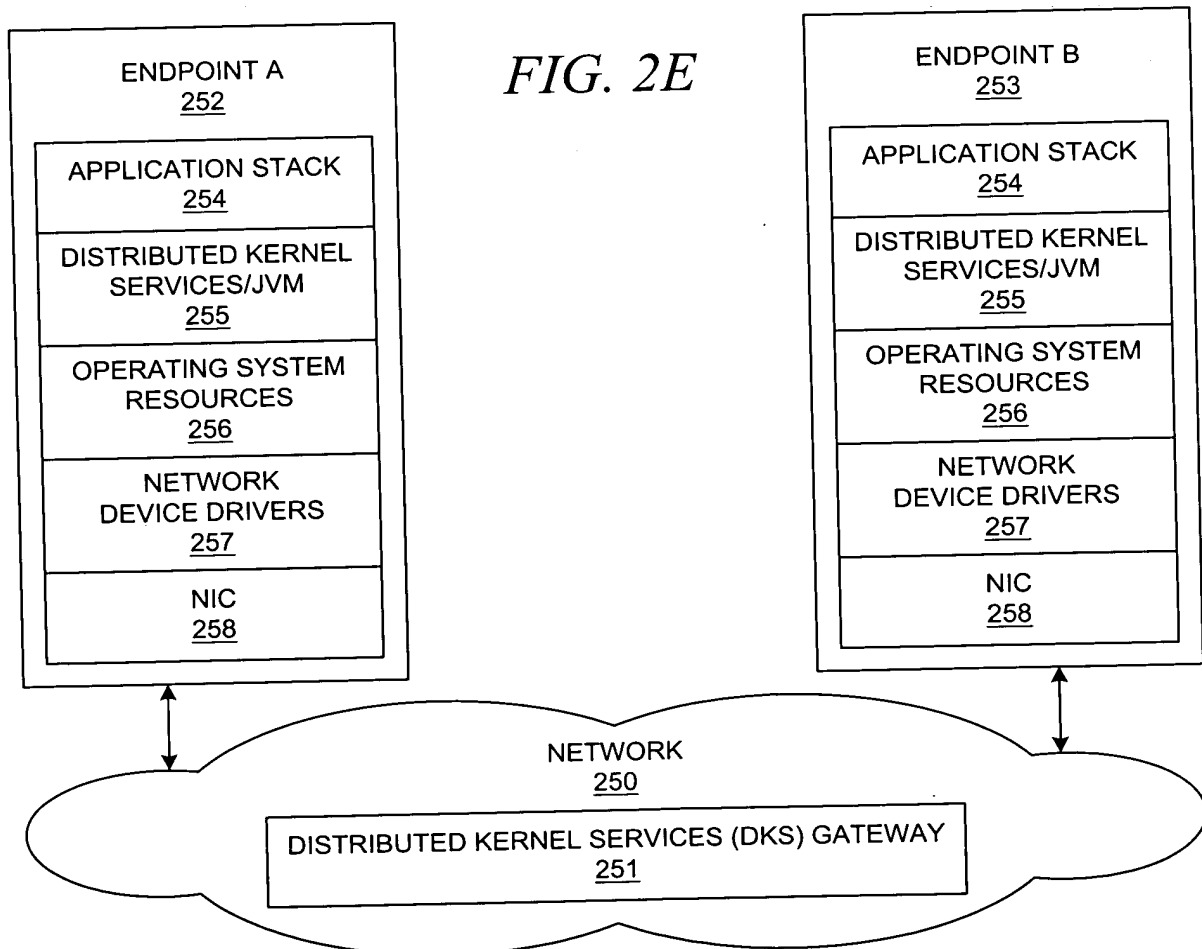


FIG. 2E

09737431-05041

4/20

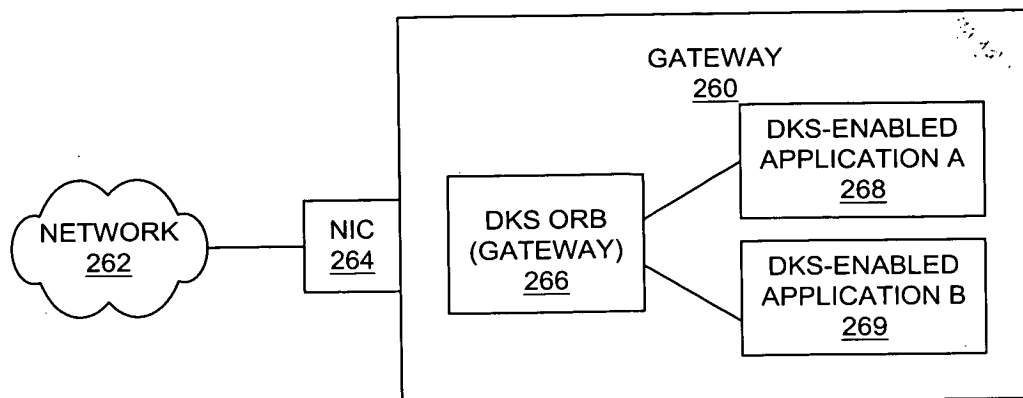


FIG. 2F

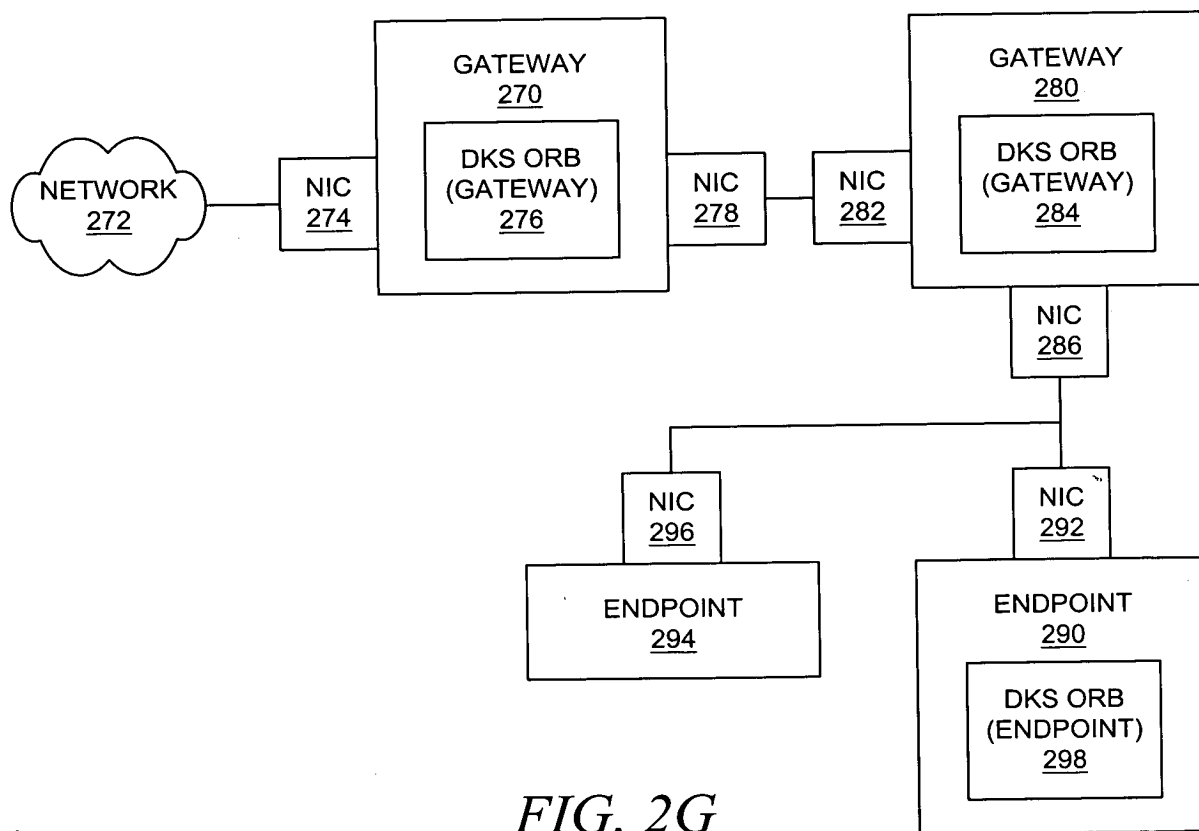


FIG. 2G

5/20

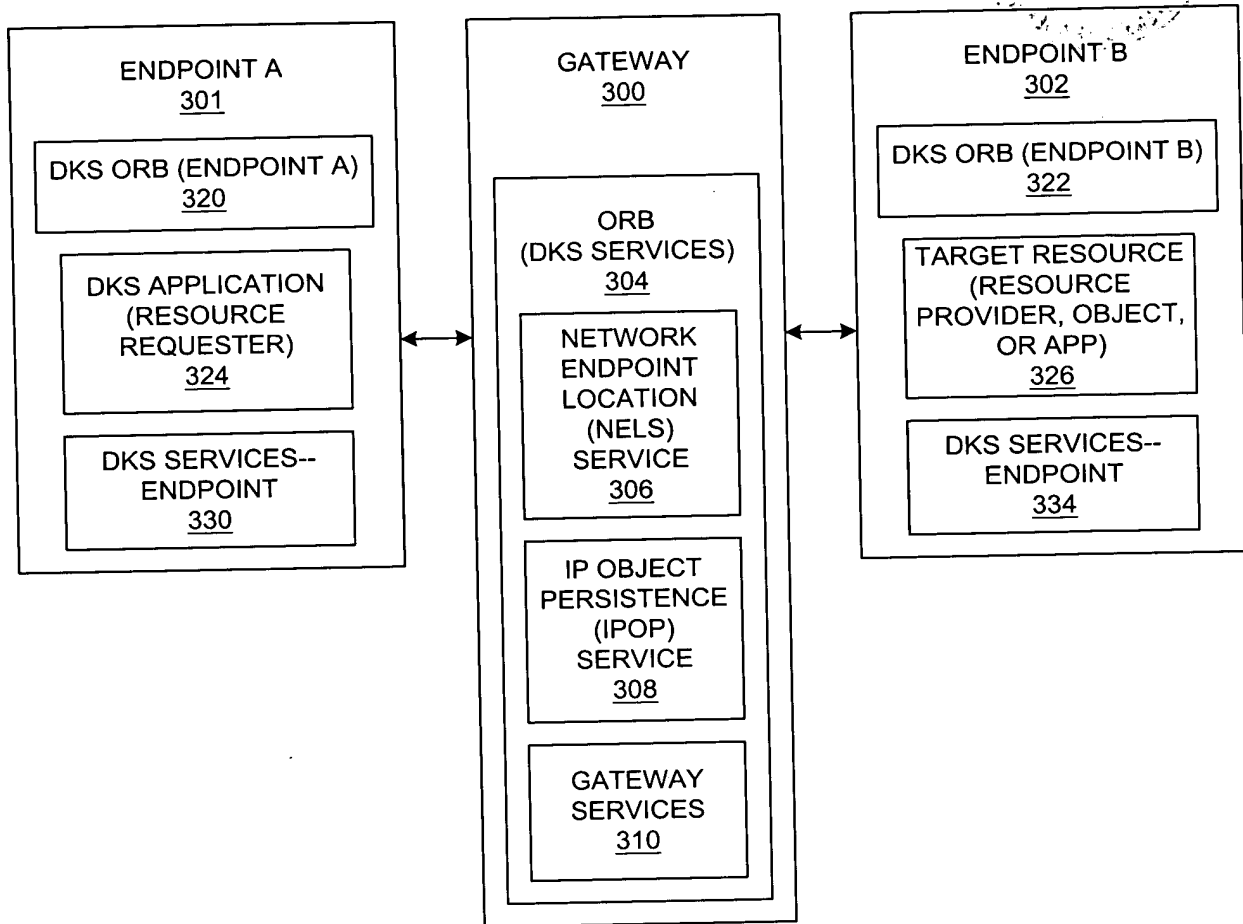


FIG. 3

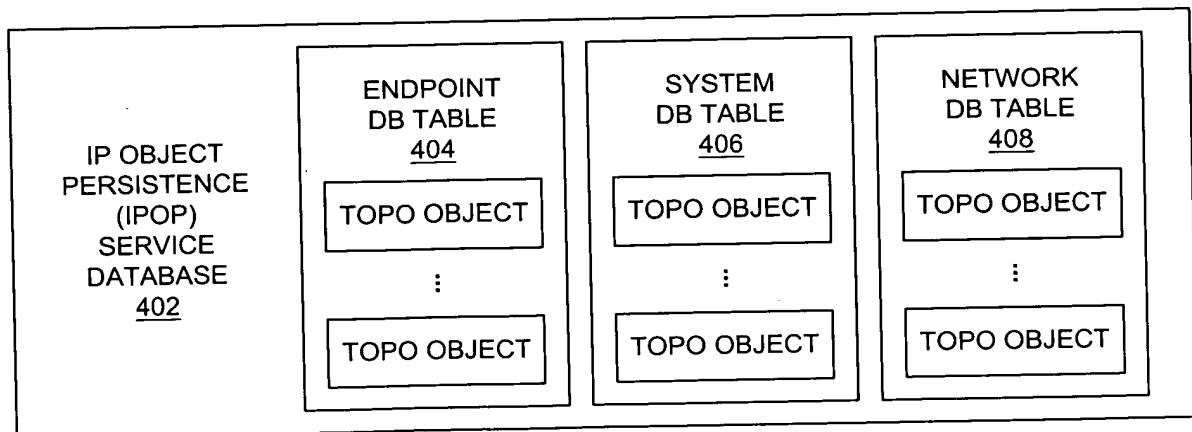


FIG. 4

6/20

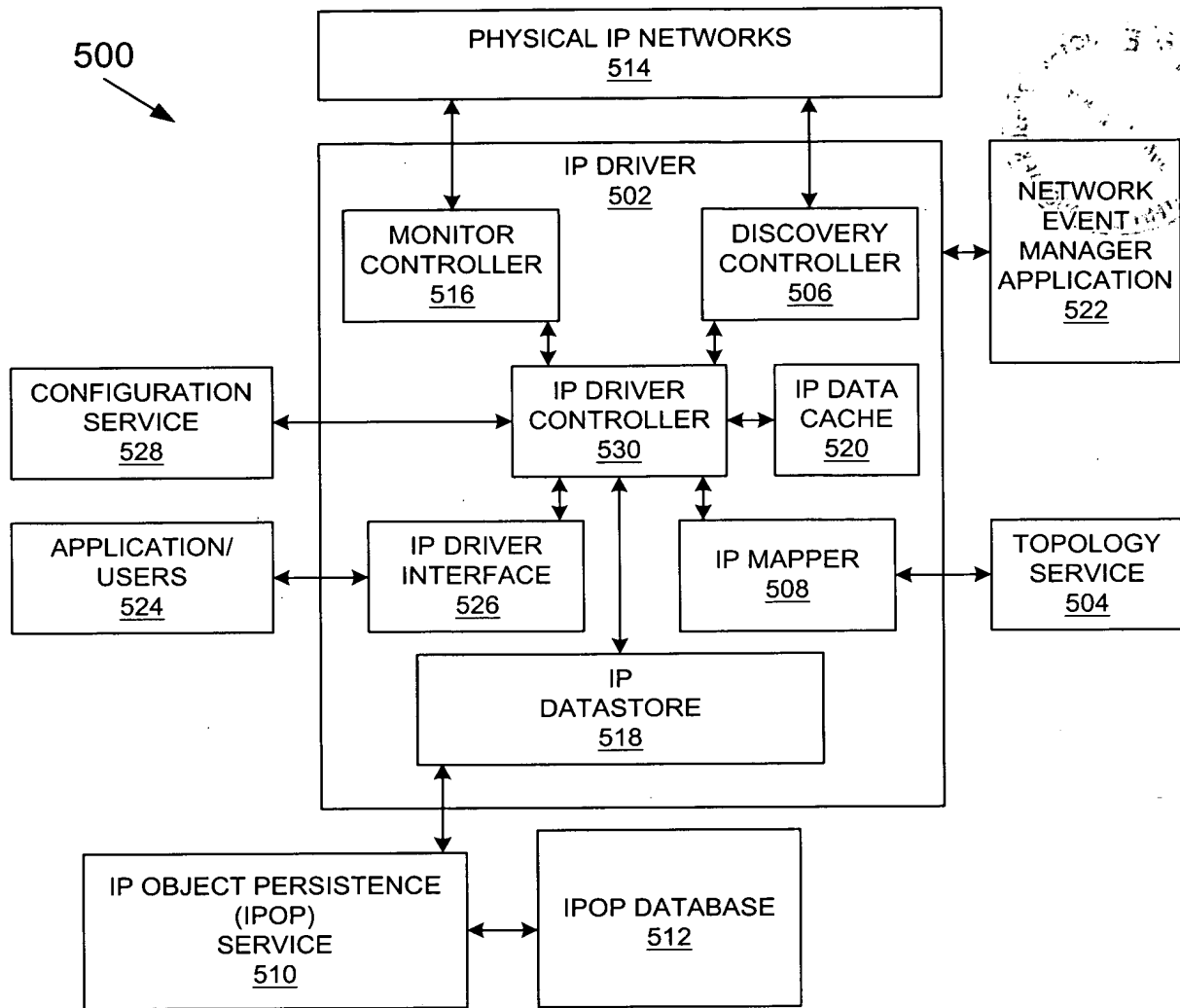


FIG. 5A

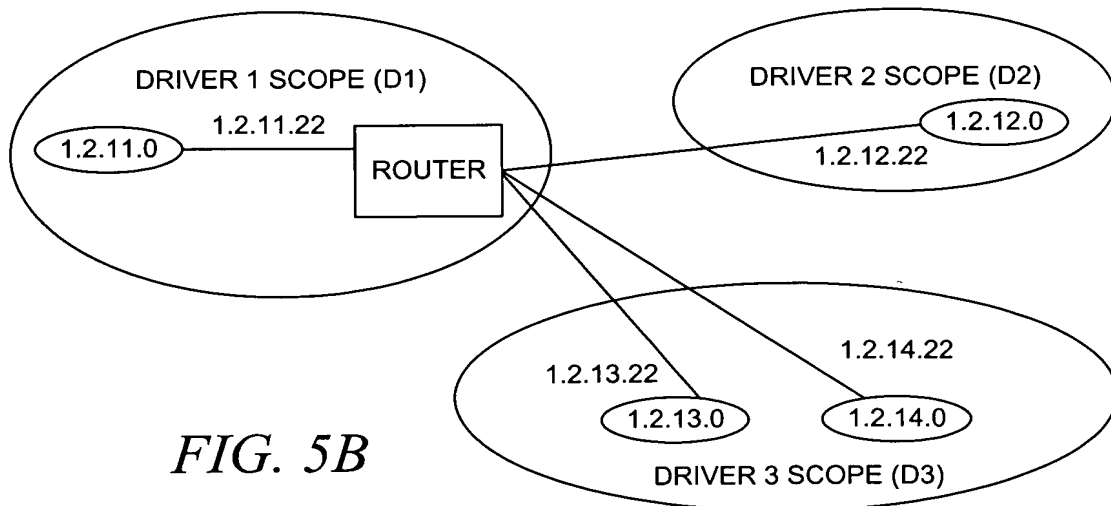


FIG. 5B

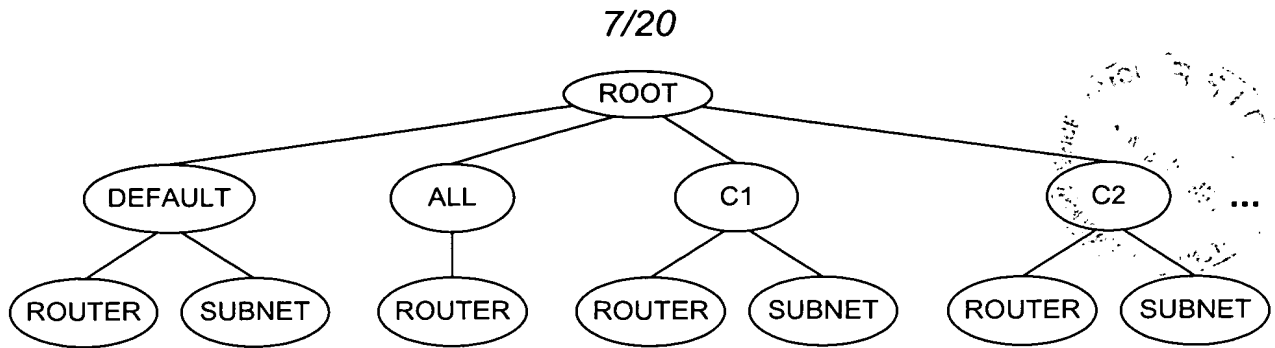


FIG. 5C

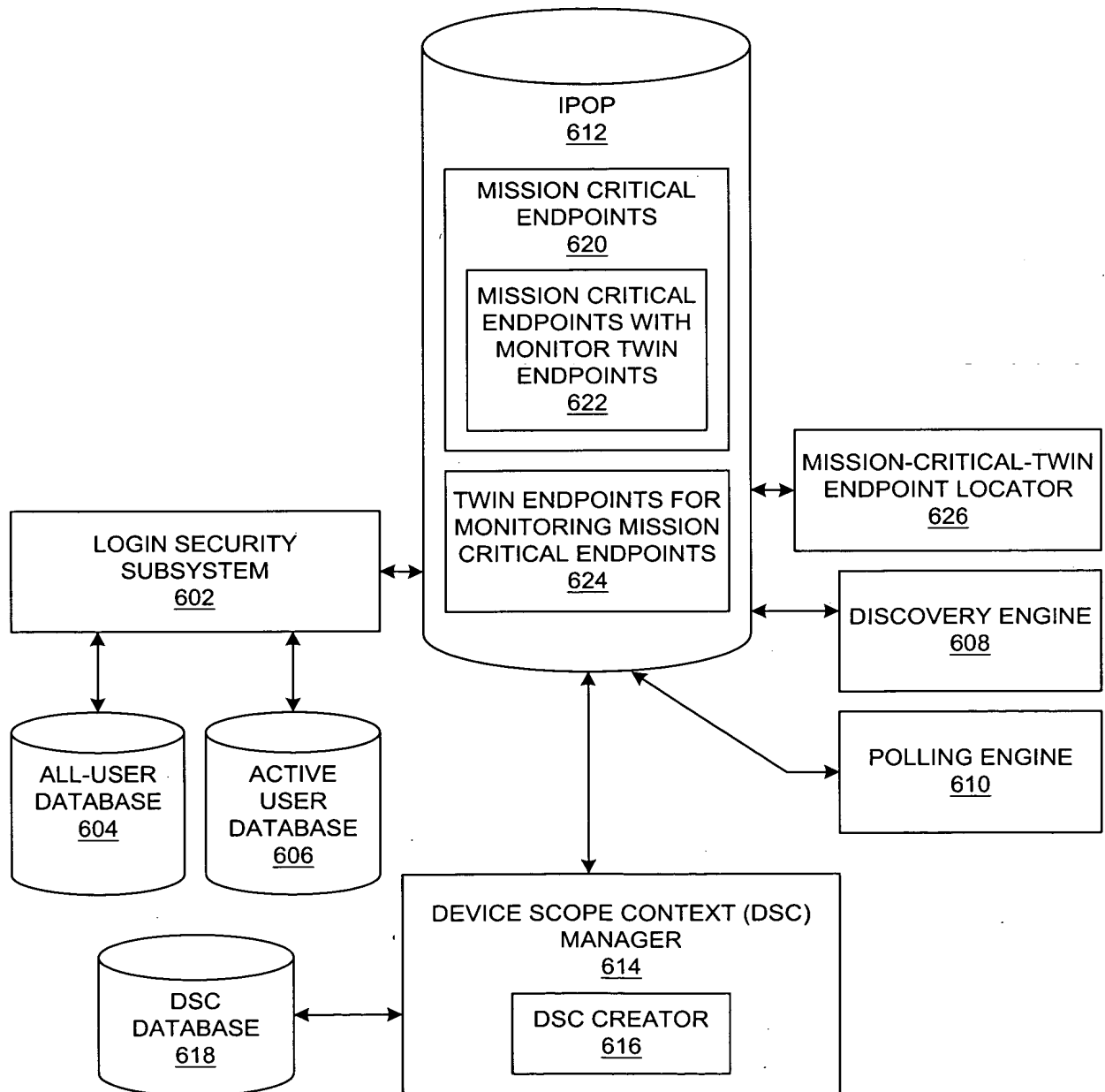


FIG. 6

8/20

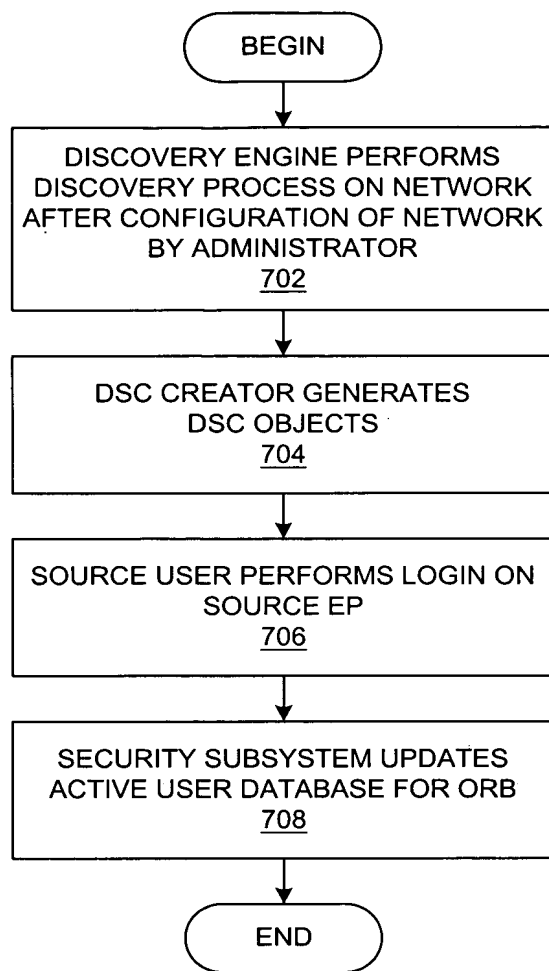


FIG. 7A

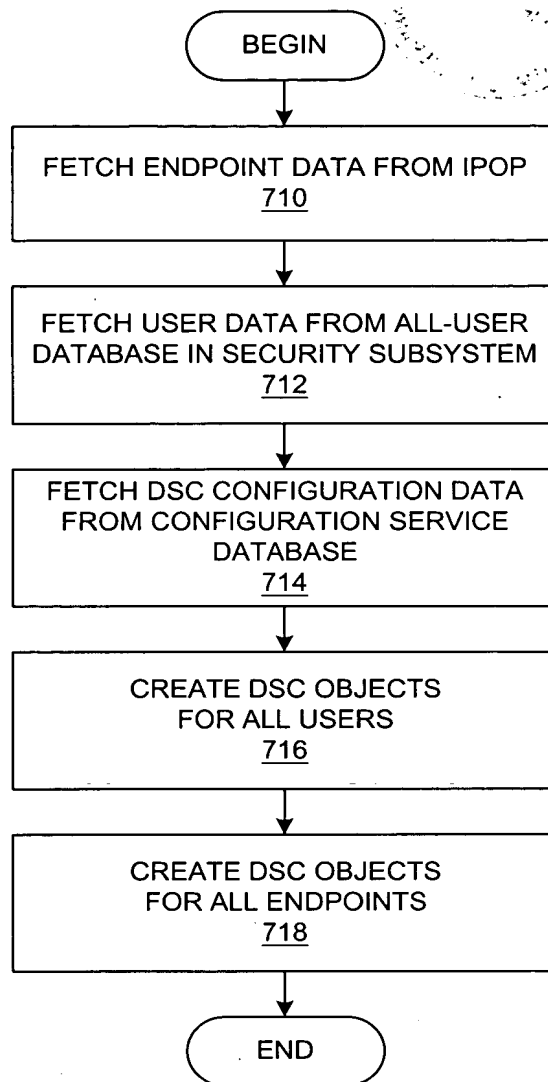


FIG. 7B

9/20

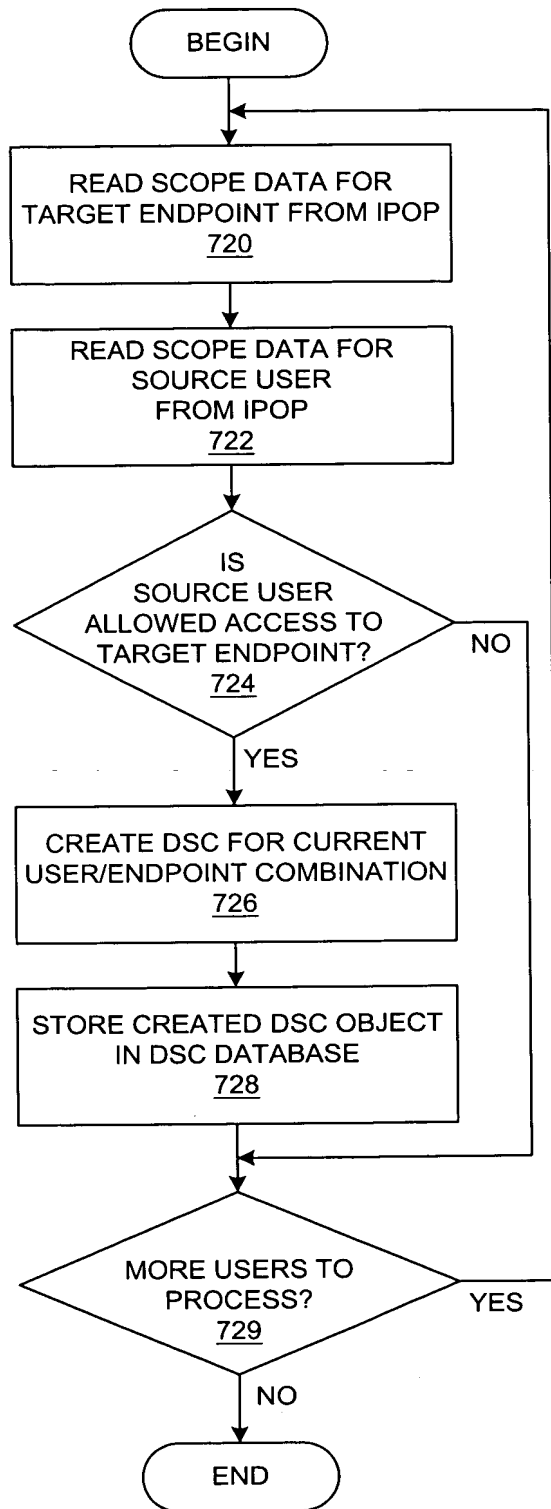


FIG. 7C

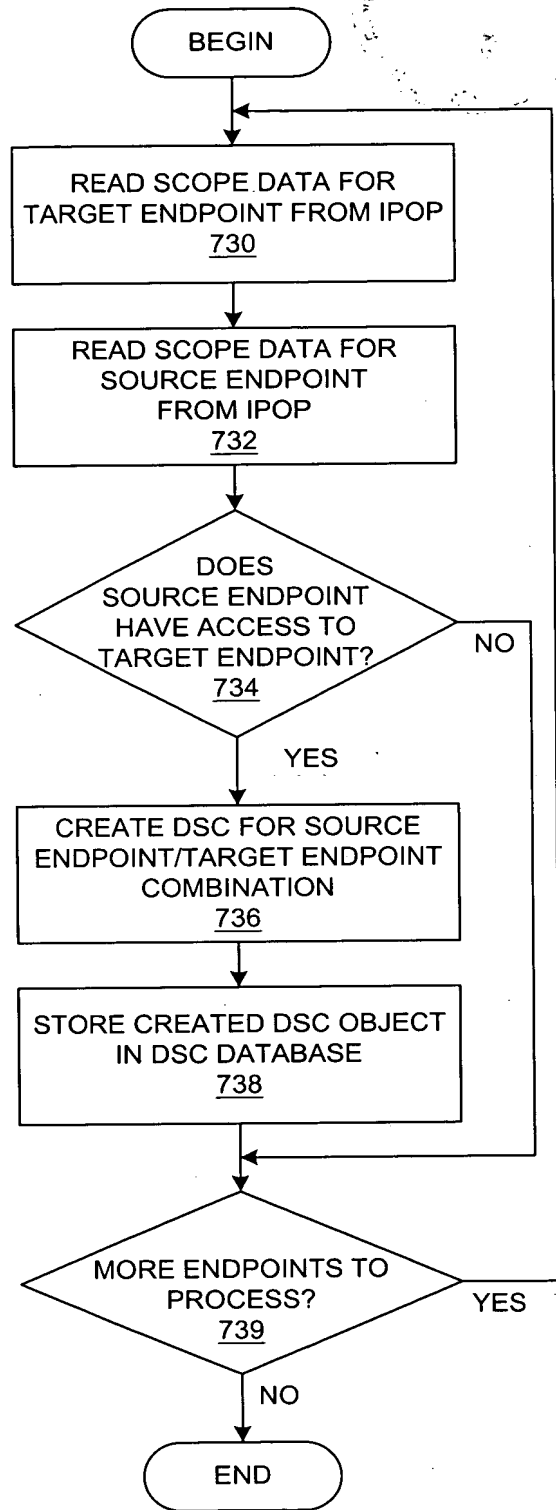


FIG. 7D

10/20

800

Network Management Application

ADAPTIVE MONITORING SETTINGS

POLLING INTERVAL MINUTES ~ 804

☒ SOURCE USER ~ 805 ~ 806

☐ SOURCE ENDPOINT ~ 807 ~ 808

PRIMARY DSC

☒ BY USER ~ 812

☐ BY ENDPOINT ~ 814

802

810

SET 816

CLEAR 818

FIG. 8A

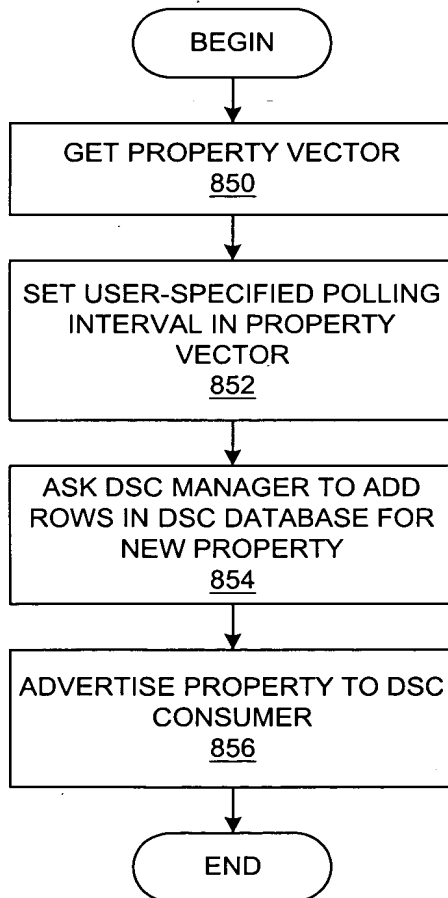


FIG. 8C

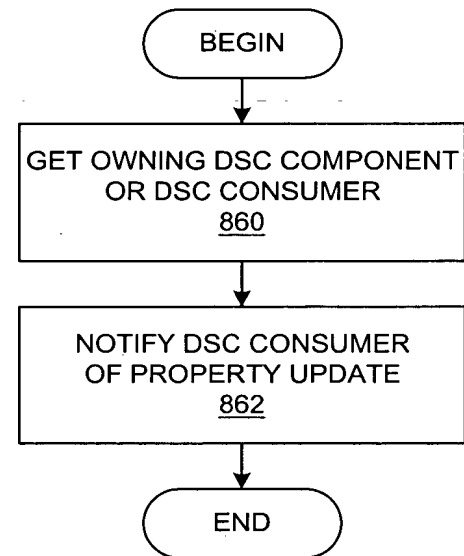


FIG. 8D

FIG. 8A

11/20

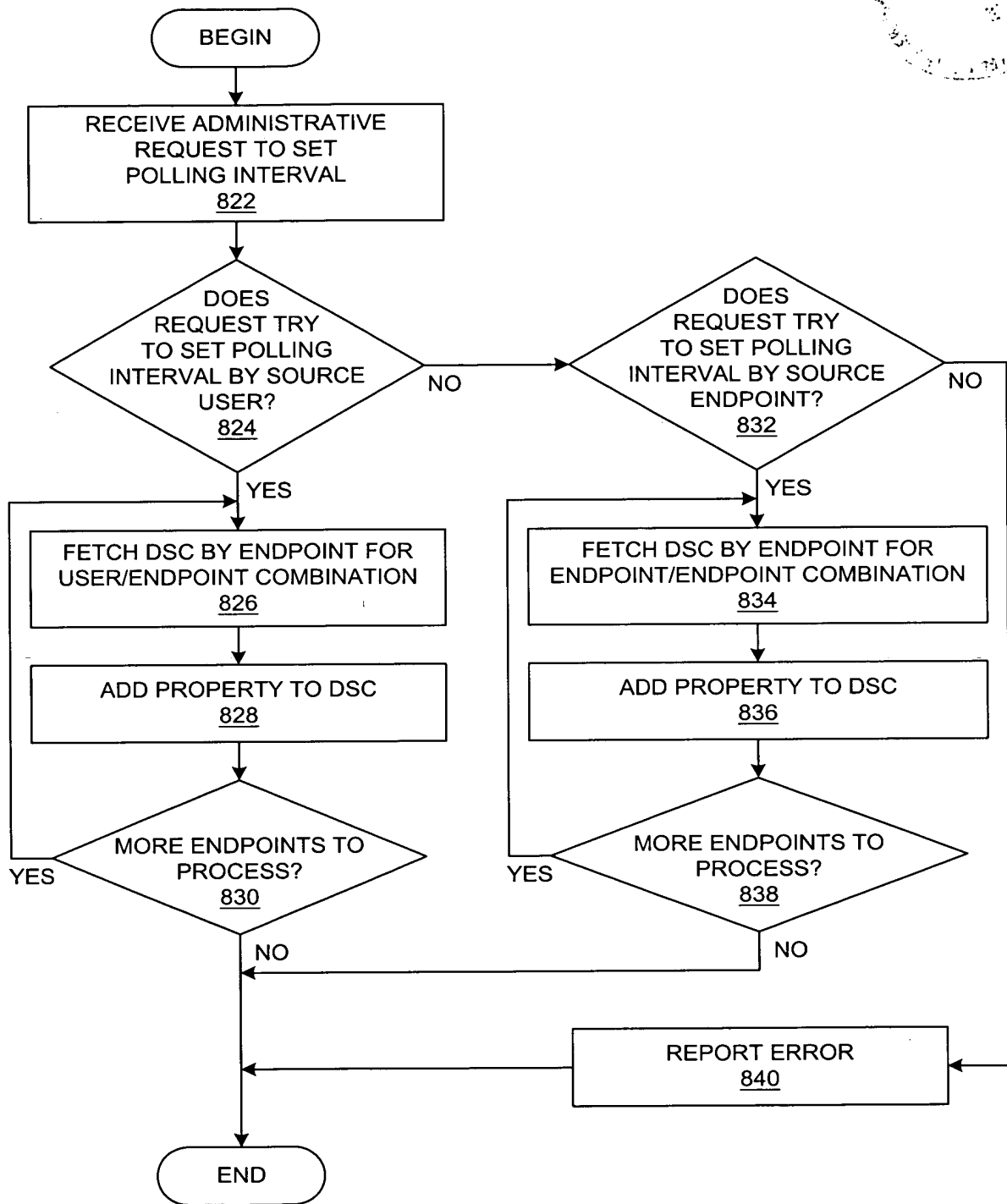


FIG. 8B

12/20

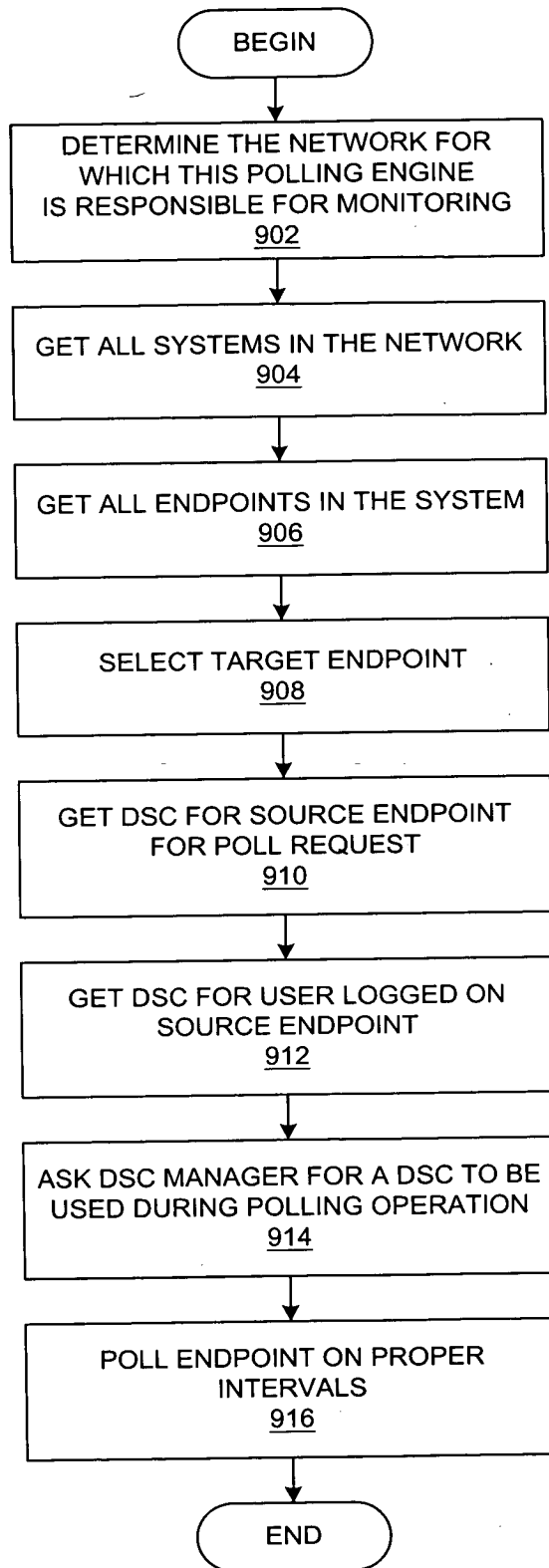


FIG. 9A

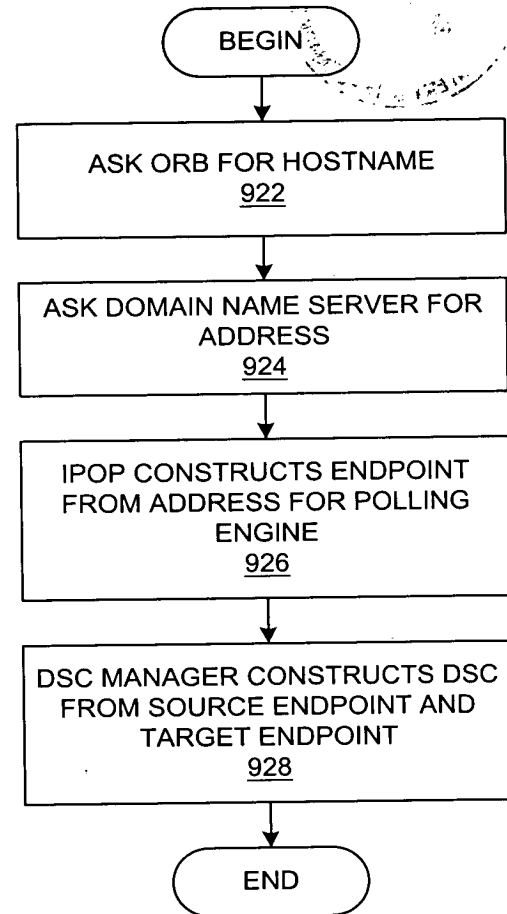


FIG. 9B

13/20

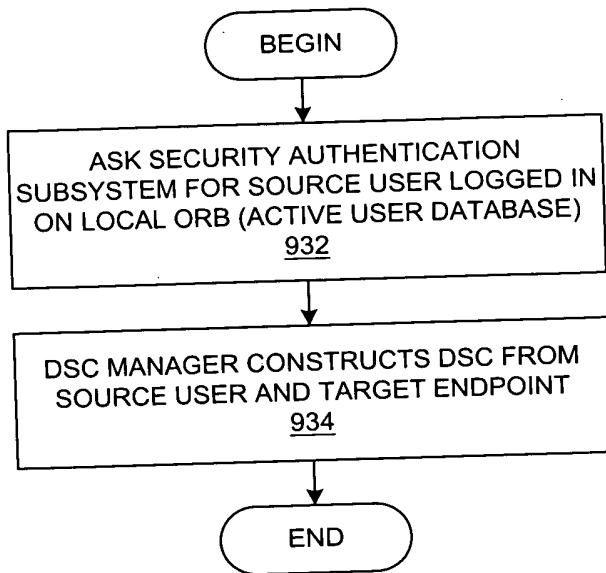


FIG. 9C

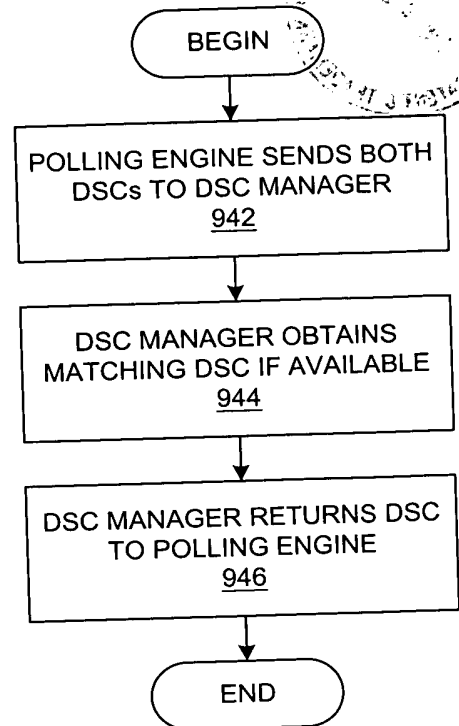


FIG. 9D

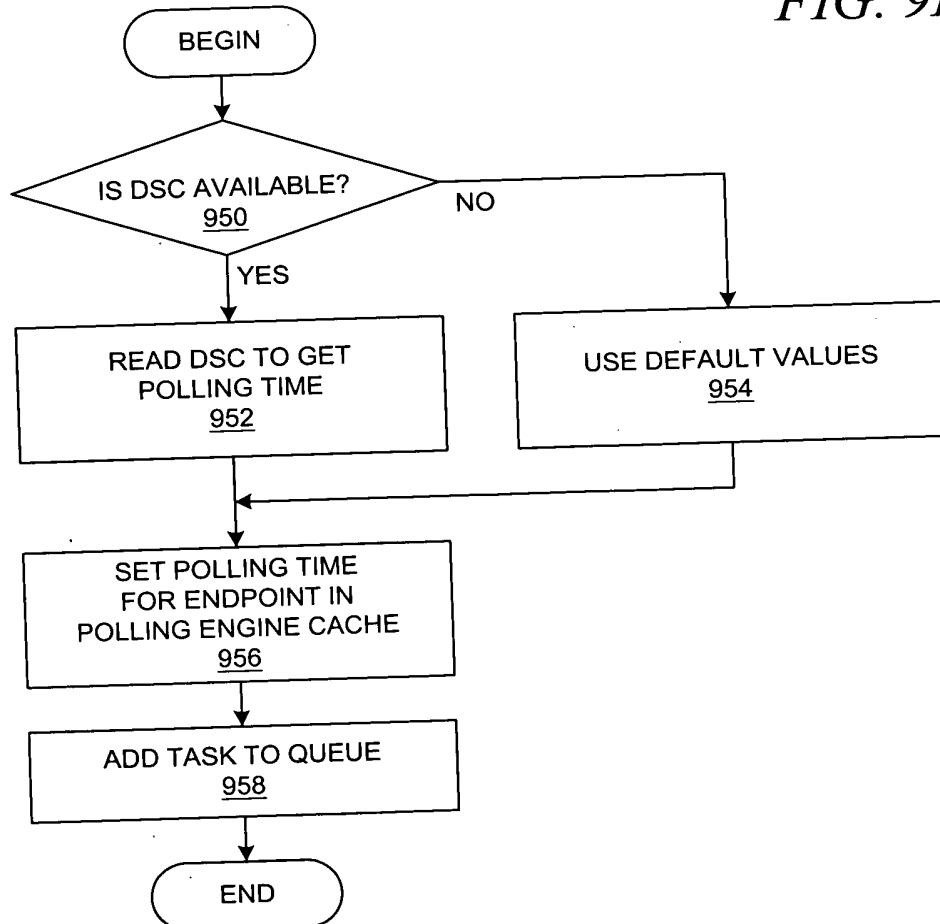


FIG. 9E

09737431.060401

14/20

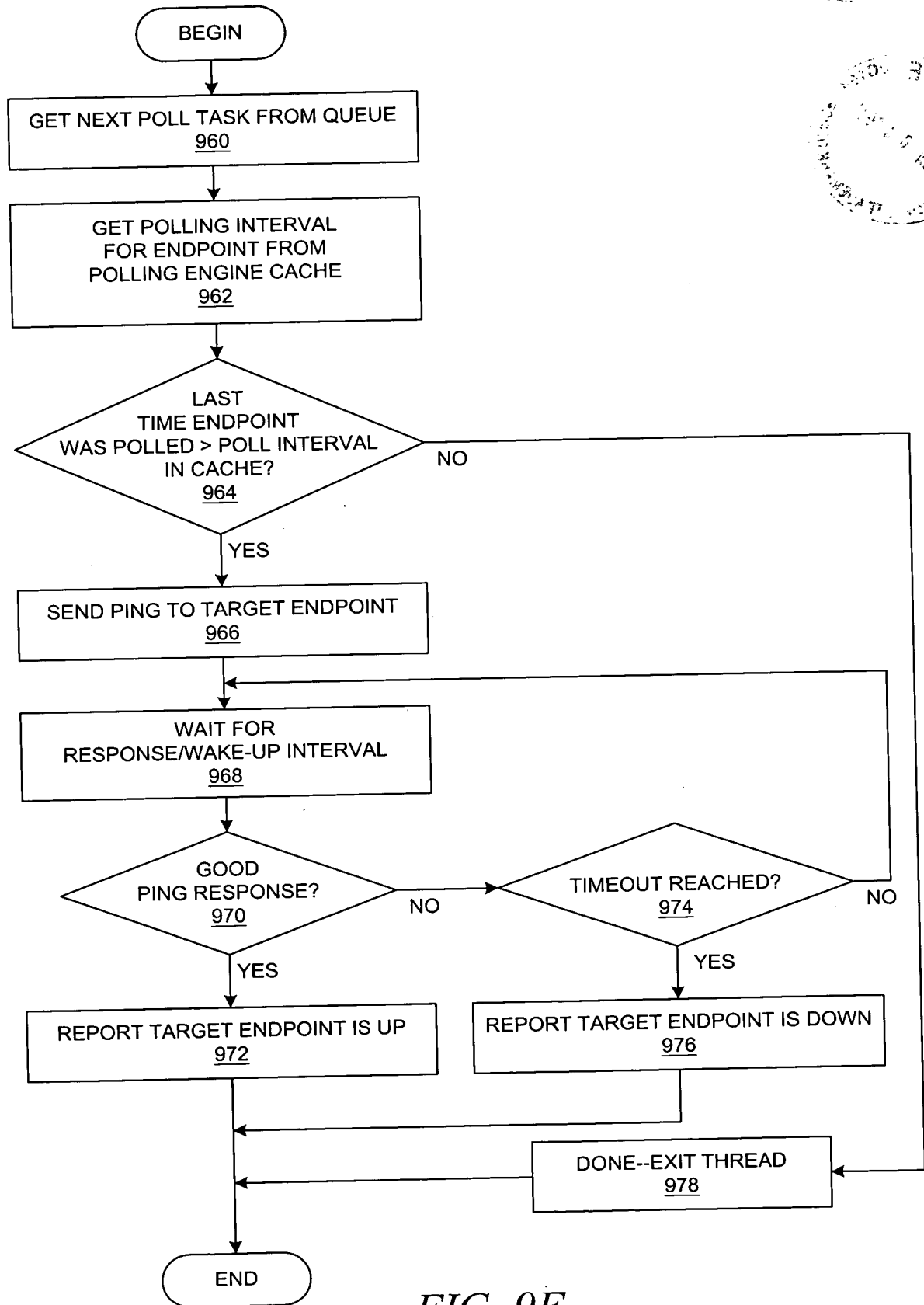


FIG. 9F

15/20

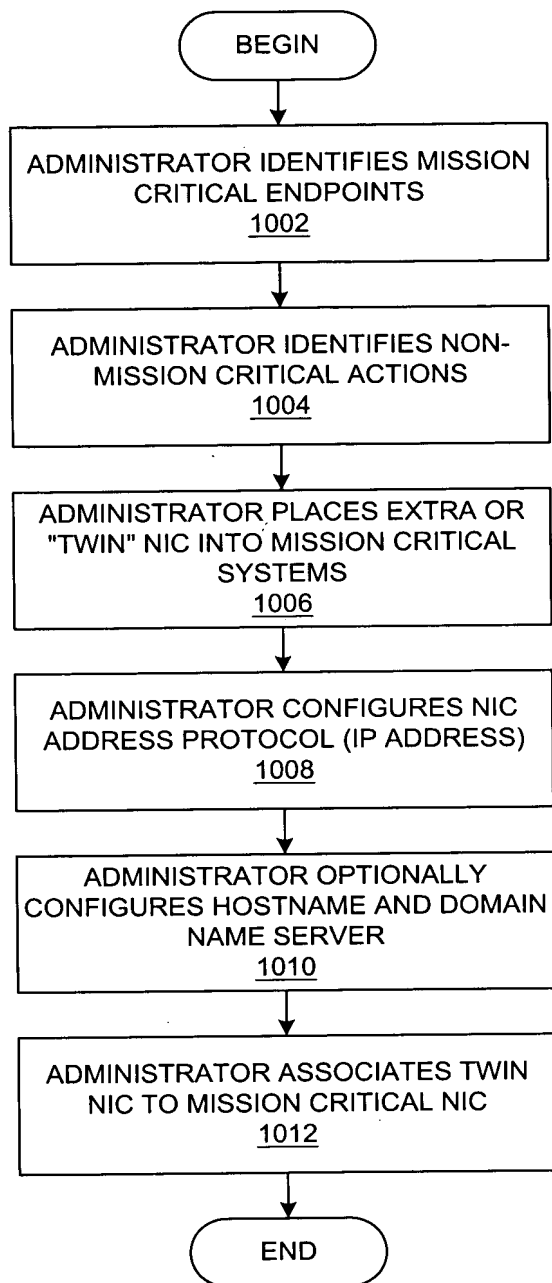


FIG. 10A

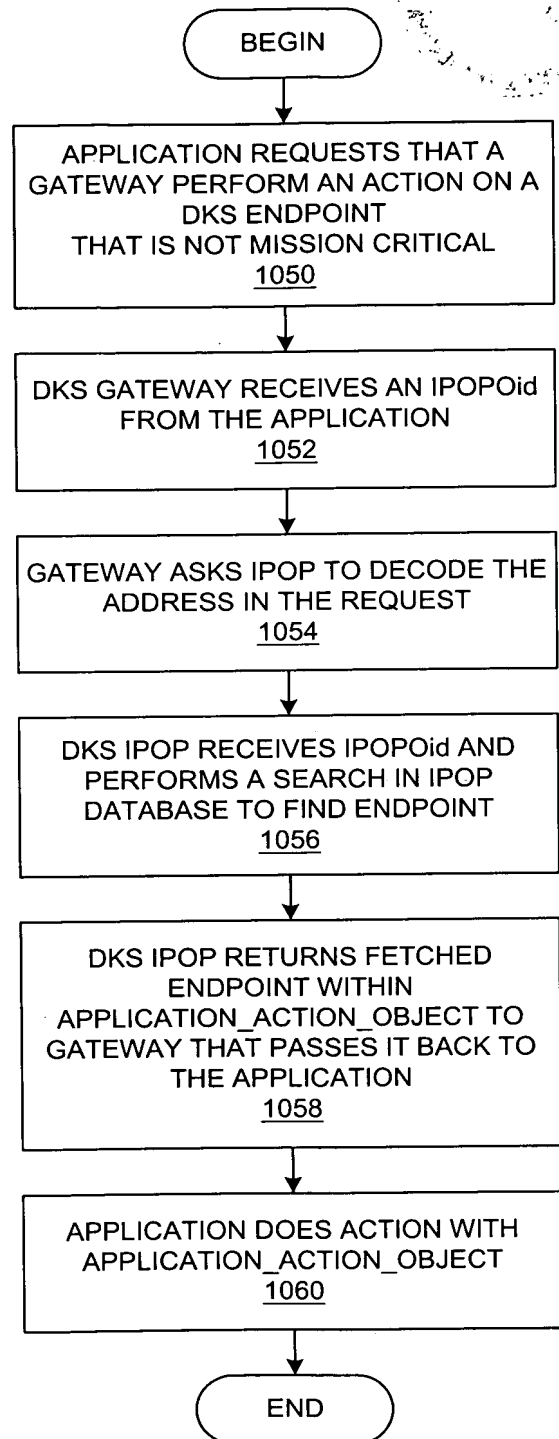


FIG. 10D

16/20

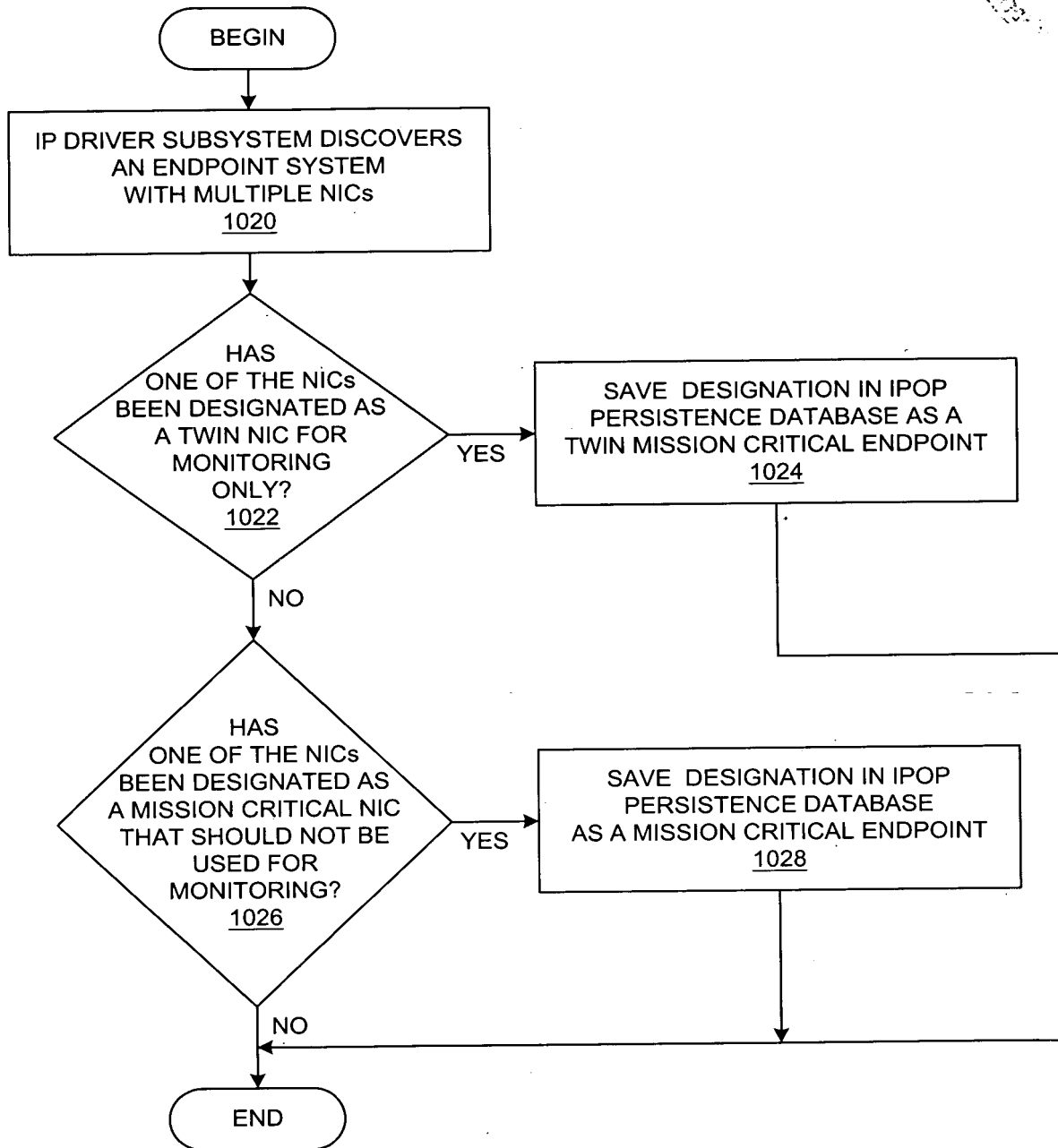


FIG. 10B

17/20

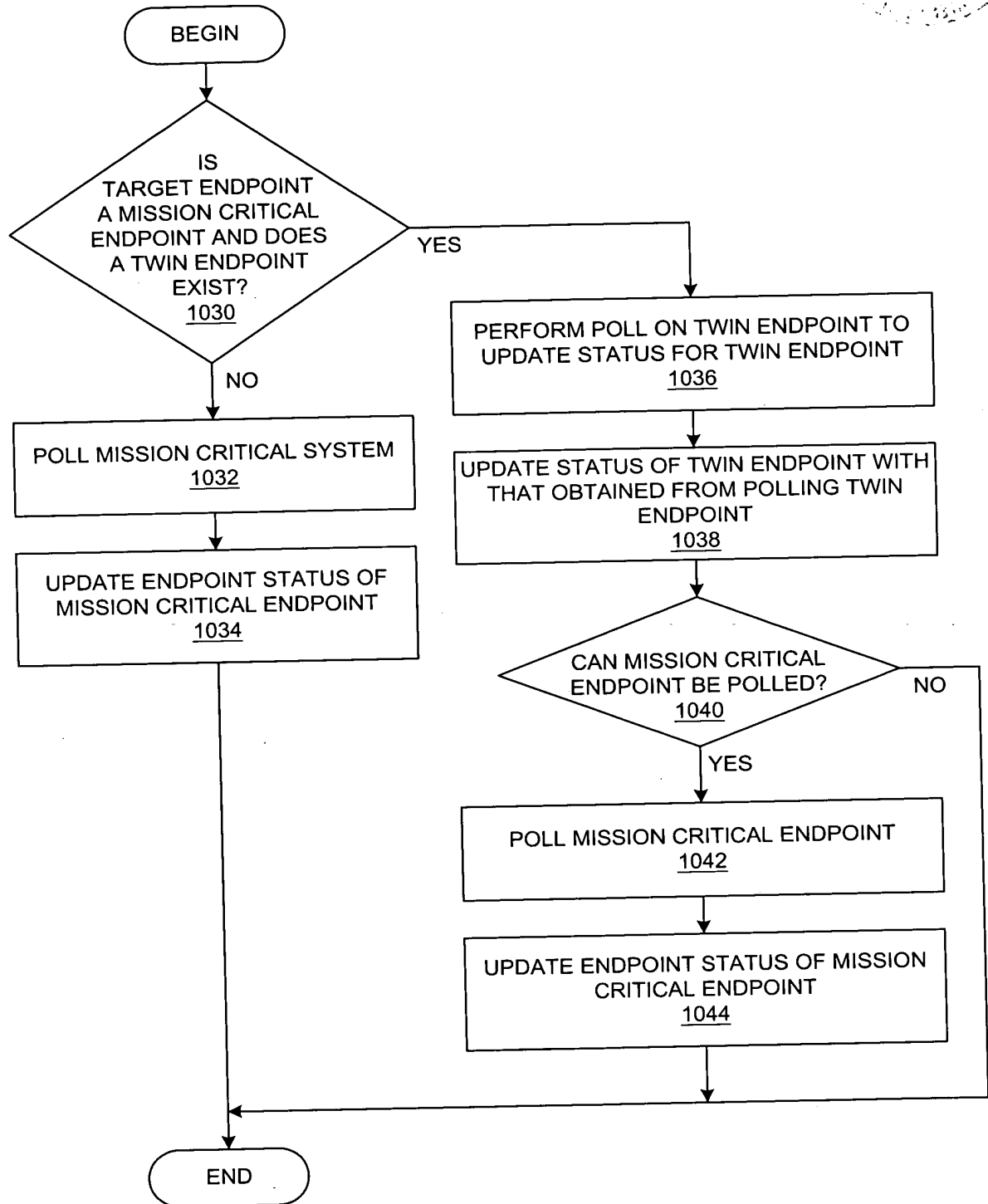


FIG. 10C

18/20

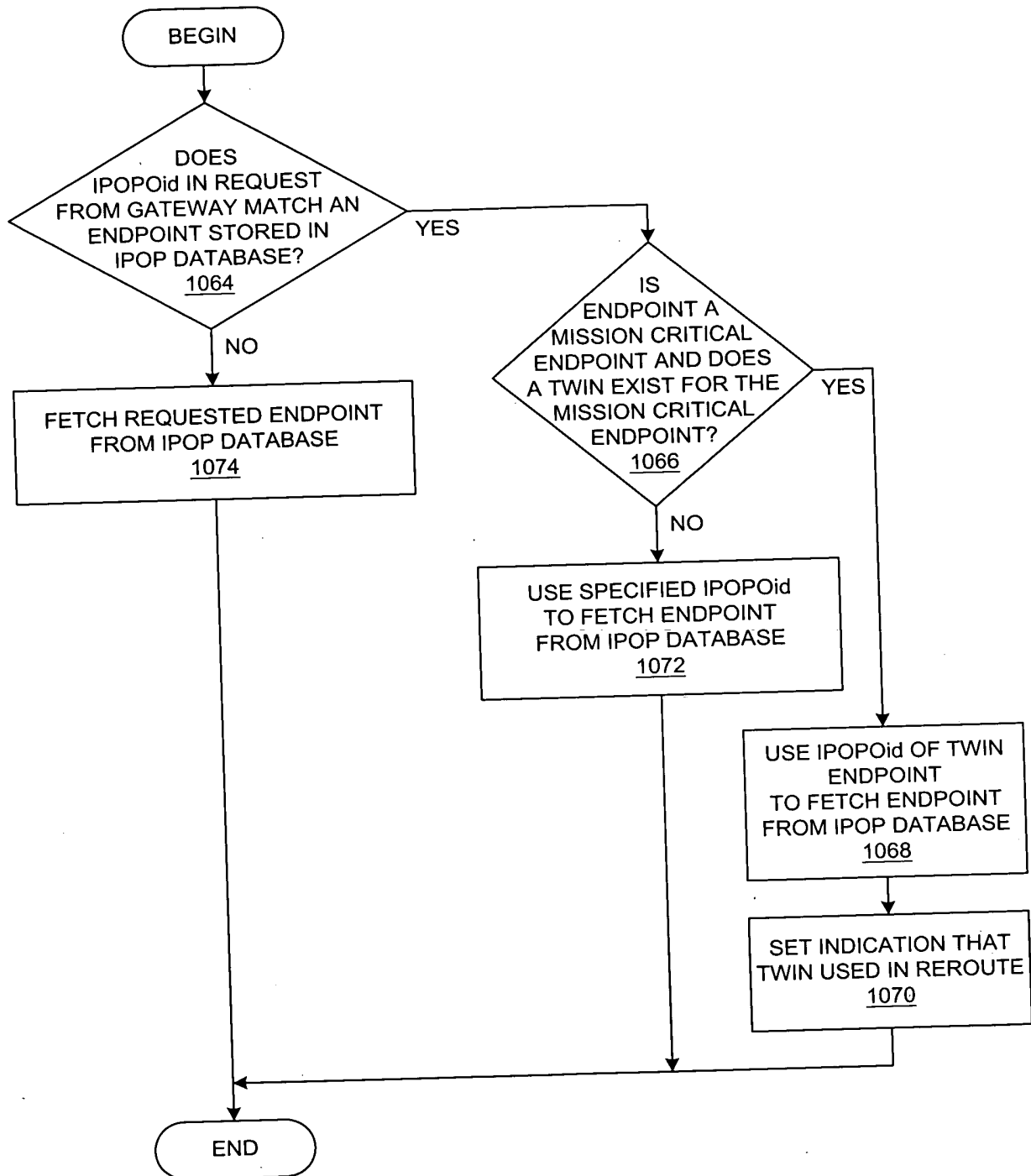
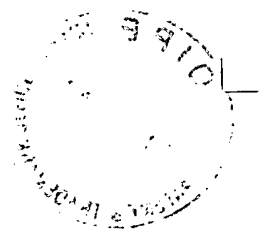


FIG. 10E

19/20

1090

Network Management Application

MISSION CRITICAL TWIN ASSIGNMENT--MISSION CRITICAL ENDPOINT: 7.17.13.11 1091

ENDPOINT TO USE AS TWIN:

☐ MAC ADDRESS: 1093

☒ VPN NUMBER: 1094 IP ADDRESS: 1095

1092

SET 1096 CLEAR 1097

FIG. 10F

CLASS ACTION_OBJECT {

// CONSTRUCTOR

ACTION_OBJECT(LONG IPADDRESS, SHORT VIRTUALPRIVATENETWORKADDRESS)

THROWS BADADDRESS ...

...

VOID PERFORMACTION() // EXECUTES ACTION METHOD

...

}

FIG. 11A

CLASS APPLICATION_ACTION_OBJECT EXTENDS ACTION_OBJECT {

boolean IsMissionCriticalAction;

// TRUE = USED TO PERFORM ENTERPRISE-RELATED WORK

// FALSE = USED TO PERFORM MONITORING OPERATIONS

// OR OTHER NON-REVENUE PRODUCING ACTION

boolean TwinUsedinReroute;

// TRUE = IPOP HAS REPLACED REQUESTED ADDRESS WITH AN ADDRESS

// THAT CAN BE USED FOR NON-MISSION CRITICAL ACTION

...

}

FIG. 11B



20/20

Public Class Endpoint {

```
//public variables
long EObjectID; // ID to object (both private and public network addresses)
InetAddress EIPAddress; // physical network address (private or public)
long EPVPN; // virtual private network ID

// get/set of variables
public long getObjectID( ) { ... }
public InetAddress getPAddress( ) { ... }
public long getVPN( ) { ... }
```

}

FIG. 11C

Class TwinMissionCriticalEndpoint extends Endpoint {

```
.
.
.
    IPOPOid missionCriticalEndpoint;
            // Mission critical endpoint that is used to gather status
    IPOPOid missionCriticalSystem;
            // Mission critical system

    long endpointStatus;
    long twinEndpointStatus;

.
.
.
}
```

FIG. 11D

Class MissionCriticalEndpoint extends Endpoint {

```
.
.
.
    boolean useForMonitoring; // TRUE = endpoint can be used for monitoring,
                               // polling, and other system-management-type
                               // resources

.
.
.
}
```

FIG. 11E

09737431.060401